

REMARKSClaim 1 and dependent claims

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki, U.S. Patent 5,365,536. Applicants respectfully traverse the rejection. Claim 1 recites, in the preamble, "[a] III-nitride light emitting device . . . ." The Examiner states "Seki discloses in figure 1, a III-nitride light emitting device comprising . . . ." Applicants can find no teaching of a III-nitride device in the text accompanying figure 1, or anywhere else in Seki. The only devices Applicants have found described in Seki are GaAs-based devices, not III-nitride devices. Since Seki fails to teach a III-nitride device, Seki fails to teach or make obvious every element of claim 1, and claim 1 is thus allowable over Seki. Applicants note that MPEP 2111.02 states that "any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation." Since claim 1's preamble limits the structure of claim 1 to a III-nitride device, the preamble must be treated as a claim limitation.

In addition, regarding the following element of claim 1: "the first and second contact material has a reflectivity to light emitted by the active region greater than 75%," the Examiner states "[a]lthough Seki does not disclose the first and second contact material has a reflectivity to light emitted by the active region greater than 75%, it would have been obvious to one of ordinary skill in the art to adjust the reflectivity of the contact materials to light emitted by the active region, and make the contacts with the same material in order to make the desired light characteristics emitted by the device." Applicants respectfully disagree. There can be no motivation to provide reflective contacts with Seki's figure 1 device because light generated by the active region does not reach the contacts. See, for example, column 3, lines 32-36, which state "Due to a difference in the index of refraction of light between the first undoped active layer 13 and each of the clad layers 12, 14, the laser beam is confined in the first undoped active layer 13." See also, for example, column 4, lines 13-18, which state

"The basic structure of the semiconductor laser thus obtained is cleaved in a rectangular form (which is about 350  $\mu\text{m}$  wide, 250  $\mu\text{m}$  deep and 100  $\mu\text{m}$  high), so that a resonator surface of the semiconductor laser is formed on the cleavage plane." The above quoted passages from Seki teach that Seki's contacts are not optically involved in the device. Accordingly, there is no motivation to make the contacts reflective. Claim 1 is thus allowable over Seki for this additional reason.

Claims 2-8 depend from claim 1 and are therefore allowable over Seki for at least the same reasons as claim 1.

Claims 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki as applied to claim 1, and further in view of Murata et al., U.S. Patent 4,732,621 (hereinafter "Murata"). Claims 9-19 depend from claim 1. Murata is cited as teaching "a textured electrode layer" and as such adds nothing to the deficiencies of Seki with respect to claim 1. Claims 9-19 are thus allowable over the combination of Seki and Murata for at least the same reason claim 1 is allowable over Seki.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki as applied to claim 1, and further in view of Yagi et al., U.S. Patent 6,642,618 (hereinafter "Yagi"). Claims 20 and 21 depend from claim 1. Yagi is cited as teaching "a submount" and as such adds nothing to the deficiencies of Seki with respect to claim 1. Claims 20 and 21 are thus allowable over the combination of Seki and Yagi for at least the same reason claim 1 is allowable over Seki.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seki and Yagi as applied to claim 21, and further in view of Herring et al., U.S. Patent 6,552,905 (hereinafter "Fischer"). Claim 22 depends from claim 1. Herring is cited as teaching "a heat sink" and as such adds nothing to the deficiencies of Seki with respect to claim 1. Claim 22 is thus

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allowable over the combination of Seki, Yagi, and Herring for at least the same reason claim 1 is allowable over Seki.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seki as applied to claim 1, and further in view of Fischer et al., U.S. Patent 6,309,953 (hereinafter "Fischer"). Claim 23 depends from claim 1. Fischer is cited as teaching "Aluminum contacts" and as such adds nothing to the deficiencies of Seki with respect to claim 1. Claim 23 is thus allowable over the combination of Seki and Fischer for at least the same reason claim 1 is allowable over Seki.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki as applied to claim 1, and further in view of Fischer and Elliot et al., U.S. Patent 6,593,657 (hereinafter "Elliot"). Claims 24 and 25 depend from claim 1. Elliot is cited as teaching "multilayer contacts" and as such adds nothing to the deficiencies of Seki with respect to claim 1. Claims 24 and 25 are thus allowable over the combination of Seki, Fischer, and Elliot for at least the same reason claim 1 is allowable over Seki. In addition, Applicants can find no suggestion in any of Seki, Fischer, and Elliot that Elliot's contacts are suitable for use in any III-V or III-nitride device. Claims 24 and 25 are thus allowable for this additional reason.

**Claim 26 and dependent claims**

Claims 26-29 and 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki as applied to claim 1, and further in view of Murata. Applicants respectfully traverse the rejection. Neither Seki nor Murata teaches a "III nitride light emitting device" as recited in the preamble of claim 26. Accordingly, even in combination, Seki and Murata do not teach all the elements of claim 26 and claim 26 is allowable over Seki and Murata.

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Claims 27-29 and 36-43 depend from claim 26 and are therefore allowable for at least the same reason as claim 26.

Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki in view of Murata as applied to claim 26, and further in view of Boyd et al., U.S. Patent 6,449,439 (hereinafter "Boyd"). Claims 30-32 depend from claim 26. Boyd is cited as teaching "a wire grid polarizer" and as such adds nothing to the deficiencies of Seki and Murata with respect to claim 26. Claims 30-32 are thus allowable over Seki, Murata, and Boyd for at least the same reason that claim 26 is allowable over Seki and Murata.

In addition, regarding claim 31, Applicants can find no suggestion in Boyd of forming a "polarization selection layer . . . disposed on the second surface" of a substrate of a light emitting device as recited in claim 31. Boyd spaces polarizer 206 apart from light source 202 such that the light from source 202 can pass through diffuser 204 in order to be more "uniform in brightness." By favoring spacing polarizer 206 apart from light source 202, Boyd teaches away from the disposing a polarization selection layer on a surface of a substrate of a light emitting device.

Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki in view of Murata as applied to claim 26, and further in view of Yagi. Claims 33 and 34 depend from claim 26. Yagi is cited as teaching "a submount" and as such adds nothing to the deficiencies of Seki and Murata with respect to claim 26. Claims 33 and 34 are thus allowable over Seki, Murata, and Yagi for at least the same reason that claim 26 is allowable over Seki and Murata.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seki in view of Murata and Yagi as applied to claim 34, and further in view of Herring. Claim 35 depends from claim 26. Herring is cited as teaching "a heat sink" and as such adds nothing to the deficiencies of Seki and Murata with respect to claim 26. Claim 35 is thus allowable over

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Seki, Murata, Yagi, and Herring for at least the same reason that claim 26 is allowable over Seki and Murata.

**Claim 44 and dependent claims**

Claims 44 and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki as applied to claim 1, and further in view of Murata. Applicants respectfully traverse the rejection. Neither Seki nor Murata teaches a "III nitride light emitting device" as recited in the preamble of claim 44. Accordingly, even in combination, Seki and Murata do not teach all the elements of claim 44 and claim 44 is allowable over Seki and Murata.

Claims 46-50 depend from claim 44 and are therefore allowable for at least the same reason as claim 44.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seki in view of Murata as applied to claim 44, and further in view of Taskar et al., U.S. Patent 5,990,531 (hereinafter "Taskar"). Claim 45 depends from claim 44. Taskar is cited as teaching a "SiC substrate" and as such adds nothing to the deficiencies of Seki and Murata with respect to claim 44. Claim 45 is thus allowable over the combination of Seki, Murata, and Taskar for at least the same reason that claim 44 is allowable over Seki and Murata.

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In view of the above arguments, Applicants respectfully request allowance of all pending claims. Should the Examiner have any questions, the Examiner is invited to call the undersigned at (408) 382-0480.

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